IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE
NORTHEASTERN DIVISION

JOHN SCOTT MAAS,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**Civil Action No. 2:20-cv-00051**
	)	**Judge Waverly D. Crenshaw, Jr.**
BP EXPLORATION AND PRODUCTION, INC. and BP AMERICA PRODUCTION COMPANY,	)	**Magistrate Judge Alistair Newbern**
	)	
	)	
Defendants.	)	

PLAINTIFF'S NOTICE OF THE FILING OF THE AFFIDAVITS OF DR. CHARLES JACKSON WRAY

Plaintiff herewith provides notice of the filing of the sworn affidavit and supplemental affidavit of CHARLES JACKSON WRAY for all purposes permitted by the Federal Rules of Civil Procedure, including the Plaintiff's response to Defendant's Motion for Summary Judgment.

Respectfully Submitted,

BURGER SCOTT & MCFARLIN

s/Wm. KennerlyBurger
Wm. Kennerly Burger
Tn BPR 3731
#12 North Public Square
Murfreesboro, Tennessee 37130
615-893 8933

An exact copy of the above has been forwarded by e-mail and regular U.S mail to the following: Howard E. Jarvis, 12144 Southwick Circle, Farragut, TN 37934 (hjarvis@maronmarvel.com); Chan E. McLeod, 1020 Highland Colony Parkway, Suite 400, Richland MS 39157 (cmcleod@maronmarvel.com) this 22d day of October, 2021.

__/sWm.KennerlyBurger_____

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE
NORTHEASTERN DIVISION

JOHN SCOTT MAAS,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**Civil Action No. 2:20-cv-00051**
	)	**Judge Waverly D. Crenshaw, Jr.**
BP EXPLORATION AND PRODUCTION, INC. and BP AMERICA PRODUCTION COMPANY,	)	**Magistrate Judge Alistair Newbern**
	)	
Defendants.	)	

PLAINTIFF'S RULE 26 EXPERT DISCLOSURE OF CHARLES J. WRAY, M.D.

---

1. The undersigned, Charles J. Wray, M.D., is a licensed medical doctor, specializing in pulmonology, and presently affiliated with the Frist Clinic, 330 23rd Avenue North, Suite 500, Nashville, Tennessee 37203 (Telephone: 615-342-5900). Attached as Exhibit "1" is my current Curriculum Vitae which I affirm to be complete and current to the best of my knowledge. The publications which I have offered are described on my attached CV. I have not offered actual court testimony in any case in the four years preceding this affidavit.

2. I have treated John Scott Maas (DOB: 02-08-1963) for "severe asthma and restrictive lung disease" since 2019. He remains under my care. Attached as Exhibit "2" are my office treatment notes reflecting Mr. Maas' diagnosis and treatment plan, including an earlier statement to Mr. Maas' counsel reflecting my opinion, and my advice to Mr. Maas that the "probable" source of his severe pulmonary problems was his repetitive exposure to a chemical oil dispersant known as "Corexit." Mr. Maas has affirmed that he was regularly exposed to Corexit on a daily basis, for approximately twelve (12) hours per day for two (2) months.

3. I have been asked to provide a more detailed statement reflecting my opinions regarding the reasoning behind my chart notes and my opinions regarding medical causation. **Please note that, for purposes of every opinion that I have expressed, I preliminarily have accepted as factually complete and correct both Mr. Maas' statements about his exposure to Corexit; his history of no prior respiratory issues; and the findings in the records of other physicians who have previously treated and diagnosed Mr. Maas. Should it be determined that those facts are not accurate or complete, I would reserve the right to alter my opinions accordingly.** My diagnosis and treatment are based upon what appear to be credible and complete information regarding the etiology of Mr. Maas' present severe respiratory debilitation.

4. In formulating the details contained in this disclosure, I have relied upon the following:

(a) My own medical chart for Mr. Maas attached as noted above (Zip Drive, Ex. 2);

(b) Environmental Protection Agency Material Safety Data Sheets for Corexit;

(c) The Affidavit of John Scott Maas;

(d) A draft of the statement of Dr. Veena B. Antony;

(e) Treatises describing the principles and methodology used by Corexit medical researchers in defining the minimal level of exposure to Corexit that will create harm to the human respiratory system. That includes, but is not limited to, a treatise authored by **Dr. Veena B. Antony (University of Alabama at Birmingham Medical Facility) entitled "Heme Oxygenase-1 Protects Corexit 9500A-Induced Respiratory Epithelial Injury across Species," Veena B. Antony, et al., published April 2, 2015, copy attached, and incorporated herein by reference** (Zip Drive, Ex. 2);

(f) **Accepting, for purposes of my opinions, the accuracy and completeness of the facts related by Mr. Maas,** it is my opinion, upon a standard of reasonable medical certainty, that it is "likely" or "more probable than not" that Mr. Maas' exposure to Corexit that was sprayed from the air, or burned in combination with crude oil, produced aerosolized exposure in sufficient quantities to cause damage to the epithelial cells of the respiratory system

based upon the biologic mechanism described in the attached treatise, incorporated herein by reference, the damage to the epithelial cells produces an inflammatory response to the respiratory cells, which may produce a swelling that may inhibit respiratory function.

(g) As to the methodology used in describing the biologic plausibility of the respiratory harm resulting from even minimal ingestion of Corexit, I accept the findings of Dr. Antony's research treatise, and incorporate the contents, attached hereto.

5. Mr. Maas claims he is not, and has never been, a smoker. His records demonstrate no family history of COPD, asthma or other respiratory conditions. From a differential diagnosis perspective, no medical records have been reviewed by me which suggest a prior history of any type of pre-existing respiratory problems prior to his exposure to the Corexit. Corexit is a known, well-documented chemical irritant that, upon exposure, produces burning of the areas exposed, including the eyes, nose, throat, and chest (see attached the Manufacturer's EPA Material Safety Data Sheet). Reliable and trustworthy research confirms the biological mechanism, as detailed in the attached affidavit. In Mr. Maas' case, it is **probable** that his chemically-induced asthma commenced with his described (see affidavit) 2010 Corexit intense exposure in which he describes (12 hours per day for about two months). The resulting harm has progressed, with age, to the point of respiratory debilitation. The specific diagnosis, based upon the exposure to breathing of Corexit, is **"severe asthma and restrictive lung disease."** The research reviewed suggests that his level of epithelial cell respiratory damage caused by Corexit may require very minimal respiratory ingestion, much less daily regular breathing of the aerosolized or burning fumes of Corexit. Air quality testing in the zone that was patrolled and cleaned by Mr. Maas and his crew have been helpful in elaborating on that aspect of the causation issue, but (reportedly) that information has been requested from BP and not provided. Of greater diagnostic importance, it is significant to note that the individual variations in cell damage may idiopathically occur in certain individuals

for reasons not known or unknowable (see attached Antony treatise). Depending on the highly individualized response, Corexit may induce the expression of Heme Oxygenase-1 (HO-1), a cyto-protected enzyme with anti-apoptotic and anti-oxidant activity in the human bronchial airway epithelium. That substance is a protectant against Corexit-induced inflammation and cellular apoptosis. Otherwise stated, the ability of certain individuals to generate that protective substance, in response to the Corexit-induced inflammation, may define the ability of some individuals to avoid or delay long-term permanent respiratory problems, while other individuals (who idiopathically do not produce the same HO-1 response) may suffer serious respiratory harm. Concisely, it is my opinion that any breathing of the highly toxic, chemical irritant "Corexit" may cause permanent respiratory harm, particularly in individuals who idiopathically are more susceptible to that damage than others who may be natural resistant. Certainly, without doubt, **if Mr. Maas is correct** in his claim that he and his crew members personally observed the spraying of Corexit from airplanes, in their immediate vicinity, and that they immediately experienced severe eye, nose and throat burning, that exposure is certainly enough to cause the type of chemically-induced asthma presently suffered by Mr. Maas, and as described in the Corexit research treatises that I have reviewed (copies attached).

6. The biologic mechanism supporting the likelihood of injury from repeated exposure to Corexit is concisely described in the following quotation from the attached treatise researched and co-authored by Dr. Antony:

> "Having established that CE (Corexit) exposure induces apoptosis of epithelial cells, we next investigated the underlying molecular mechanisms causing cell death. Overproduction of ROS can cause apoptosis by inducing mitochondrial dysfunction and subsequent release of pro-apoptotic factors and ROS directly induces capese-free-dependent apoptosis. Intracellular ROS generation was evaluated by pre-incubating BEAS-2B cells with a fluorescent probe, DCFDA, which can be oxidized by H2O2. ROS generation was augmented after three hours of exposure to CE (Corexit) in a dose-dependent manner. … Our results suggest

cell death. Overproduction of ROS can cause apoptosis by inducing mitochondrial dysfunction and subsequent release of pro-apoptotic factors and ROS directly induces capese-free-dependent apoptosis. Intracellular ROS generation was evaluated by pre-incubating BEAS-2B cells with a fluorescent probe, DCFDA, which can be oxidized by H2O2. ROS generation was augmented after three hours of exposure to CE (Corexit) in a dose-dependent manner. … Our results suggest that ROS production and oxidative stress lead to apoptosis in epithelial cells exposed to CE (Corexit)." Antony, copy attached, p. 7 of 16.

7. As Mr. Maas' diagnosing and treating pulmonologist, it is my opinion, based upon reasonable medical certainty, that it is probable that the level of exposure described by Mr. Maas to aerosolized (by spraying or burning) Corexit-saturated crude oil, was substantially sufficient exposure to cause harm to the epithelial cells of Mr. Maas' airways, resulting in a progressive decline (as he has aged) in his respiratory function. I support the treatise findings describing the "general causation" considerations confirming that even minimal Corexit exposure can cause severe cell damage that is irreversible in **some** individuals, based upon their individual propensities to resist that cellular damage by their ability to respond to the chemically-induced inflammation by a naturally occurring protective agent, HO-1. Corexit is an acknowledged, highly toxic chemical irritant to human contact, particularly the sensitive respiratory airways. In Mr. Maas' case, the facts summarized suggest no basis for any differential diagnosis, leading to the "probable" conclusion (more likely than not) that his claimed daily exposure to Corexit for two months in the Summer of 2010 damaged the epithelial cells in his respiratory system, producing the present diagnosis of chemically induced asthma and resulting restrictive lung disease.

WITNESS MY HAND this the 8th day of April, 2021.

CJWray

Charles J. Wray, M.D.

Notary Public

My Commission Expires: 1-30-2024

Prepared by:

BURGER, SCOTT & McFARLIN

/s/Wm. Kennerly Burger
Wm. Kennerly Burger, BPR #3731
Attorney for Plaintiff
12 Public Square North
Murfreesboro, TN 37130
Telephone: (615) 893-8933
Facsimile: (615) 893-5333
kenburger@comcast.net

CERTIFICATE OF SERVICE

I hereby certify that a true and exact copy of the foregoing was forwarded, via electronic filing, to the following: Howard E. Jarvis (hjarvis@maronmarvel.com), Maron, Marvel, Bradley, Anderson & Tardy, LLC, 12144 Southwick Circle, Farragut, TN 37934, on this the 9th day of APRIL, 2021.

/s/Wm. Kennerly Burger
Wm. Kennerly Burger

cc: Mr. Christian K. Burger
Ms. Claire Burger Perkins
Mr. Trey McFarlin
Mr. John Scott Maas

Charles Jackson Wray, MD

The Frist Clinic • 300 23rd Avenue North • Suite 500 • Nashville, TN 37203 • 615-342-5900

EDUCATION:

- University of California San Diego - San Diego, CA
  Pulmonary & Critical Care Fellow, 2004-2007
- Vanderbilt University School of Medicine - Nashville, TN
  Hugh J. Morgan Chief Resident in Internal Medicine, 2003-2004
  Internal Medicine Resident, 2000-2003
  M.D., May 2000
- Dartmouth College - Hanover, NH
  B.A. in Engineering Sciences, Minor in French, June 1996

EMPLOYMENT:

- The Frist Clinic - Nashville, TN
  Pulmonary, Critical Care, & Sleep Medicine, 2007-Present
- Escondido Pulmonary Group - Escondido & Poway, CA
  Pulmonary & Critical Care Locum Tenens, 2005-2006
- San Diego VA Medical Center - La Jolla, CA
  Emergency Room Attending Physician, 2005-2006
- Kindred Hospital - San Diego, CA
  Evening Physician, 2005-2006
- Skyline Medical Center - Nashville, TN
  Evening Physician, ICU, 2003-2004

LEADERSHIP:

- Director, Quality Program
  Select Specialty Hospital Nashville, 2021-Present
- Director, Pharmacy & Therapeutics Program
  Select Specialty Hospital Nashville, 2007-2021
- Member, Medical Executive Committee
  Select Specialty Hospital Nashville, 2007-Present
- Member, Centennial Medical Staff Association Finance Committee
  Centennial Medical Center Nashville, 2018-Present
- Member, Medical Executive Committee
  Centennial Medical Center Nashville, 2015-2020

RESEARCH:

- Hemodynamic Predictors of Post-Operative Outcomes following Pulmonary Thromboendarterectomy for Chronic Thromboembolic Pulmonary Hypertension.

PUBLICATIONS:

- Wray CJ, Auger WA. Evaluation of patients for pulmonary endarterectomy. Semin Thorac Cardiovasc Surg 2006; 18:223-9.
- Wray CJ, Morris TA. Thromboembolic disease: therapy. In: Bordow RA, Ries AL, Morris TA, eds. Manual of clinical problems in pulmonary medicine. 6th edition. Philadelphia, PA: Lippincott Willams & Williams, 2005.

PRESENTATIONS:

- "Use of Omalizumab for Cessation of Corticosteroid Therapy in a Patient with Sarcoidosis, Aspergillomas, Long-Standing Asthma, and Allergic Bronchopulmonary Aspergillosis." Western Region American Federation for Medical Research Meeting. Carmel, CA. Feb 2006.
- "Pulmonary Vascular Resistance and Pulmonary Thromboendartecectomy: A Prospective Study." American Thoracic Society International Conference. San Francisco, CA. May 2007.
- "Correlation between Preoperative Fractional Pulse Pressure and Early Hemodynamic Outcomes after Pulmonary Thromboendarterectomy." American Thoracic Society International Conference. San Francisco, CA. May 2007.
- "Preoperative Clinical Predictions of Early Postoperative Hemodynamic Outcomes after Pulmonary Thromboendarterectomy." American Thoracic Society International Conference. San Francisco, CA. May 2007.

LICENSURES & CERTIFICATIONS:

- Tennessee Medical License
- Board Certification in Internal Medicine, August 2003
- Board Certification in Pulmonary Disease, October 2007
- Board Certification in Critical Care Medicine, November 2008
- Board Certification in Sleep Medicine, November 2009

HONORS:

- American Federation for Medical Research Pulmonary and Critical Care Award, 2006
- General Internal Medicine Outstanding Resident Award, Vanderbilt, 2002
- Tom E. Nesbitt Award for Character & Leadership, Vanderbilt, 2000
- Benjamin F. Byrd Cardiovascular Research Award (AHA), 1997
- Magna Cum Laude Graduate, Dartmouth College, 1996
- Philip R. Jackson Award for Improved Safety Device, Dartmouth College, 1995

ZIP DRIVE

RECORDS

WRAY AFFIDAVIT EX. 2

TRI STAR MEDICAL GROUP
The Frist Clinic

www.thefristclinic.com

Internal Medicine
F. Karl VanDevender, M.D.
Louis C. Johnson, M.D.
John E. Anderson, M.D.
Marilynn Michaud, M.D.
Matthew J. Beuter, M.D.
Deepinder S. Bal, M.D.
David W. Allen, M.D.
Kevin S. McKechnie, M.D.
Kevin M. Rigtrup, M.D., Ph.D.
Chrystal G. Clamp, M.D.
Sterling I. Barrett, M.D.
W. Anthony Lizarraga, M.D.
Andrea M. Beck, M.D.
Robert L. Beck, M.D.
L. Cole Barfield, M.D.
David Reyes, M.D.
Regina Bowe, M.D.
Julie Caldwell, DNP, FNP-BC
Jan Muirhead, ANP-BC
R. Danielle Talley, FNP-BC

Pulmonary Disease, Critical Care & Sleep Medicine
David A. Jarvis, M.D.
Robert J. Mangialardi, M.D.
Salim S. Mehio, M.D.
C. Jackson Wray, M.D.

Gastroenterology
Thomas J. Lewis, M.D.
A. Saeed Fakhruddin, M.D.
Ira E. Stein, M.D.
Jonathan A. Schneider, M.D.
Matthew Neff, M.D.
Anjali S. Shah, M.D.
Cassie Calder, ACNP-BC
A. Kathleen Nebel, FNP-BC
Elizabeth Baumstark, FNP-BC

Endocrinology, Diabetes & Metabolism
Michael G. Carlson, M.D.
Amanda L. Daniel, M.D.
Annis M. Marney, M.D.
Bettina Engh, ACNP-BC, RD
Cherish Holt, APN-BC

Infectious Diseases
Juli G. Horton, M.D.
Sydney M. Hester, M.D.
Paul Bryant, M.D.

Neurology
Michael J. Kaminski, M.D.

December 11, 2020

William Kennerly Burger
Burger, Scott and McFarlin
in association of Attorneys
Murfreesboro, TN 37130
Fax#: 615-893-5333

RE: John Scott Maas
DATE OF BIRTH: 02/08/1963

Dear Mr. Burger:

I treat Mr. Maas for severe asthma and restrictive lung disease, which is probably related to exposure to oil dispersants used during the cleanup from the 2010 deep water horizon oil spill.

Sincerely,

C. Jackson Wray, MD

CW/SP

DD: 12/11/2020
DT: 12/11/2020
JOB ID: 35053442

330 23rd Avenue North, Suite 500
Nashville, TN 37203
Phone 615-342-5900 Fax 615-342-7864

2400 Patterson St., Suite 400
Nashville, TN 37203
Phone 615-342-5900 Fax 615-342-5912

330 23rd Ave. North, Suite 300
Nashville, TN 37203
Phone 615-342-6010 Fax 615-342-7898

MAAS, John S DOB: 02/08/1963 (57 yo M) Acc No. 8X101868423 DOS: 11/05/2020

TRISTAR MEDICAL GROUP
The Frist Clinic

Maas, John S

57 Y old Male, DOB: 02/08/1963
Account Number: 8X101868423
505 Ripley Road, SPARTA, TN-38583
Home: 931-935-0449
Guarantor: Maas, John S Insurance: MEDICARE TN
PART B Payer ID: SMTNo
Appointment Facility: 303111FSC FRIST CLINIC SPECIALTY

11/05/2020

CHARLES J. WRAY, MD CHN#: 1285662148

Current Medications

Taking
- Albuterol Sulfate HFA 108 (90 Base) MCG/ACT Aerosol Solution 2 puffs as needed Inhalation every 4 hrs
- Gabapentin 600 MG Tablet as directed Orally
- Vitamin D3 1000 UNIT Tablet 1 tablet Orally Once a day, Notes: 5000 IU
- Breo Ellipta 200-25 MCG/INH Aerosol Powder Breath Activated 1 puff Inhalation Once a day, Notes: Verbal order per provider
- Albuterol Sulfate (2.5 MG/3ML) 0.083% Nebulization Solution 3 ml as needed Inhalation every 8 hrs, Notes: Verbal order per provider
- Albuterol Sulfate (2.5 MG/3ML) 0.083% Nebulization Solution 3 ml as needed Inhalation every 8 hrs, Notes: Written Order Per Provider
- Breo Ellipta 200-25 MCG/INH Aerosol Powder Breath Activated 1 puff Inhalation Once a day, rinse mouth after using, Notes: Written Order Per Provider
- Singulair 10 MG Tablet 1 tablet Orally Once a day, Notes: Written Order Per Provider

Not-Taking
- HydrOXYzine 10 MG Tablet as directed Orally

Unknown
- Lisinopril 40 MG Tablet 1 tablet Orally Once a day
- Metoprolol Tartrate 25 MG Tablet 1 tablet with food Orally Twice a day
- Asmanex HFA 200 MCG/ACT Aerosol 2 puffs Inhalation Twice a day
- Medication List reviewed and reconciled with the patient

Past Medical History

Asthma.

Reason for Appointment

1. 1. Virtual Face-to-Face Visit (Portal/Facetime/Skype/Other) I PHONE FACETIME 228 327 0459
2. 2. Verbal Informed Consent Obtained by Scheduling Staff (Co-pays and Deductibles Apply) LM
3. 3. Provider Location [Office]. Patient Location [Home].
4. 4. Others Present for Visit (if applicable):
5. 5. Chief Complaint: FOLLOW UP ASTHMA

History of Present Illness

Patient History:

Follow-up visit. He continues to struggle from a respiratory standpoint. He has been off of the Breo for several months given how expensive it is. He continues on Singulair. He is using albuterol as needed. He was unable to complete the home sleep study we arranged at his last visit. He continues to describe fatigue and poor sleep quality. He tells me that more information has, now regarding the dispersent that he used from his she up during the oil ship in 2009. He is also had a number of skin and digestive problems which she thinks are related to this as well.

Vital Signs

Ht 69 in, Wt 230 lbs, BMI 33.96, Weight Change -22 lb
HT AND WT PER PT LM.

Examination

PULMONARY:

General: no acute distress, conversant, obese.
Head: normocephalic.
Eyes: sclerae anicteric, eyelids intact.
Ears: normal external appearance of ears, hearing grossly intact.
Nose: normal external appearance of nose.
Neck: supple.
Respiratory: normal respiratory effort.
Neurology: alert & oriented, normal speech, cranial nerves II/VII/VIII grossly intact.
Psych: normal affect, appropriate insight, normal mood.
Extremities: no clubbing, cyanosis, or edema of upper

MAAS, John S **DOB:** 02/08/1963 (57 yo M) **Acc No.** 8X101868423 **DOS:** 11/05/2020

Reported ... ory of ARDS.
Dyslipid...
Neuropat...

Allergie
N.K.D.A.

extremities.

Spirometry performed June 7, 2019 revealed severe restriction with significant bronchodilator response. Best FVC was 2.39 L representing 51% of predicted.

Chest CT scan performed July 17, 2019 was unremarkable.

Lab work from June 7, 2019 significant for IgE level of 232 and eosinophil level of 0.2.

Assessments

1. Unspecified asthma - J45.909 (Primary)
2. Restrictive pattern present on pulmonary function testing - R94.2
3. Nonsmoker - Z78.9
4. Snoring - R06.83
5. Chronic fatigue, unspecified - R53.82

History of chemical inhalation 2009.

Treatment

1. Others

Start Advair Diskus Aerosol Powder Breath Activated, 500-50 MCG/DOSE, 1 puff, Inhalation, Twice a day, 30 day(s), 1 Inhalers, Refills 3
Clinical Notes:

I will try switching him to Advair 500/50 - 1 inhalation twice daily. Rinse mouth afterwards . We also discussed Dulera and Symbicort as other options. Provide 6 months of refills on Singulair 10 mg p.o. daily. Continue albuterol as needed. He is going to send me additional information regarding the dispersent. I remain concerned for symptomatic obstructive sleep apnea. Let us refer him once again for home sleep study. I have instructed him to do it without supplemental oxygen via nasal cannula. He plans to get the influenza vaccination soon. Reviewed action plan. Return to clinic in 6 months or sooner if needed.

Follow Up

6 Months

CJWRAY

MAAS, John S DOB: 02/08/1963 (57 yo M) Acc No. 8X101868423 DOS: 11/05/2020

Electronically signed by CHARLES WRAY , MD on 11/06/2020 at 10:15 AM CST

Sign off status: Completed

303111FSC FRIST CLINIC SPECIALTY
330 23RD AVE N
SUITE 500
NASHVILLE, TN 372031661
Tel: 615-342-5900
Fax: 615-342-7863

Progress Note: CHARLES J. WRAY, MD 11/05/2020

Note generated by eClinicalWorks EMR/PM Software (www.eClinicalWorks.com)

TRI STAR MEDICAL GROUP
The Frist Clinic

Maas, John S
56 Y old Male, DOB: 02/08/1963
Account Number: 8X101868423
505 Ripley Road, SPARTA, TN-38583
Home: 931-935-0449
Guarantor: Maas, John S Insurance: MEDICARE TN
PART B Payer ID: SMTNo
Appointment Facility: 303111FSC FRIST CLINIC SPECIALTY

01/17/2020 PROGRESS NOTE: CHARLES J. WRAY, MD CHN#: 1285662148

Current Medications
Taking
- Albuterol Sulfate HFA 108 (90 Base) MCG/ACT Aerosol Solution 2 puffs as needed Inhalation every 4 hrs
- Gabapentin 600 MG Tablet as directed Orally
- Vitamin D3 1000 UNIT Tablet 1 tablet Orally Once a day, Notes: 5000 IU
- HydrOXYzine HCl 10 MG Tablet as directed Orally
- Albuterol Sulfate (2.5 MG/3ML) 0.083% Nebulization Solution 3 ml as needed Inhalation every 3 hrs
- Breo Ellipta 200-25 MCG/INH Aerosol Powder Breath Activated 1 puff Inhalation Once a day, rinse mouth after using, Notes: Written Order Per Provider
- Breo Ellipta 200-25 MCG/INH Aerosol Powder Breath Activated 1 puff Inhalation Once a day, Notes: Verbal order per provider

Not-Taking
- Singulair 10 MG Tablet 1 tablet Orally Once a day
- Lisinopril 40 MG Tablet 1 tablet Orally Once a day
- Metoprolol Tartrate 25 MG Tablet 1 tablet with food Orally twice a day
- Asmanex HFA 200 MCG/ACT Aerosol 2 puffs Inhalation twice a day
- Medication List reviewed and reconciled with the patient

Past Medical History
Asthma.
Reported history of ARDS.
Dyslipidemia.
Neuropathy.

Family History
Mother: unknown
Father: unknown

Social History
Alcohol Use
Patient *does not use alcohol*
Tobacco Status
Patient is *a never smoker*

Allergies
N.K.D.A.

Reason for Appointment
1. 6mo f/u

History of Present Illness
Patient History:
Here for follow-up. He continues on Breo and albuterol. He is not currently on Singulair. He still struggles with some exertional dyspnea. He is also not sleeping well. He describes nocturnal dyspnea and "panic attacks." He does snore some. It does not sound as though it is loud. He had a sleep study about 10 years ago which was apparently negative.

Vital Signs
Ht 69 in, Wt 252 lbs, BMI 37.21, Weight Change 1 lb, BP 124/78, HR 56, Oxygen sat % 93 RA REST.

Examination
PULMONARY:
General: no acute distress.
Head: atraumatic, normocephalic.
Eyes: pupils reactive to light bilaterally, sclerae anicteric.
Throat: moist mucous membranes, orophaynx without lesions.
Neck: supple, no thyromegaly, jugular venous pressure within normal limits.
Respiratory: normal respiratory effort, decreased breath sounds bilaterally, no crackles or wheezes.
Cardiovascular: normal rate, regular rhythm, no murmur.
Gastrointestinal: abdomen soft, non-tender, normoactive bowel sounds.
Neurology: moves all extremities.
Psych: alert and oriented x 3, normal affect.
Extremities: no cyanosis, clubbing, or edema.
Spirometry performed June 7, 2019 revealed severe restriction with significant bronchodilator response. Best FVC was 2.39 L representing 51% of predicted.
Chest CT scan performed July 17, 2019 was unremarkable.
Lab work from June 7, 2019 significant for IgE level of 232 and eosinophil level of 0.2.

Assessments
1. Unspecified asthma - J45.909 (Primary)
2. Restrictive pattern present on pulmonary function testing - R94.2
3. Nonsmoker - Z78.9
4. Snoring - R06.83

5. Chronic fatigue, unspecified - R53.82

History of chemical inhalation 2009.

Treatment

1. Snoring

Referral To:Center Centennial Medical Sleep Medicine
Reason:HOME SLEEP
STUDY|PRECERT/SCHEDULE/CONFIRM

2. Chronic fatigue, unspecified

Referral To:Center Centennial Medical Sleep Medicine
Reason:HOME SLEEP
STUDY|PRECERT/SCHEDULE/CONFIRM

3. Others

Refill Albuterol Sulfate Nebulization Solution, (2.5 MG/3ML) 0.083%, 3 ml as needed, Inhalation, every 8 hrs, 30 days, 100, Refills 5, Notes: Written Order Per Provider
Refill Breo Ellipta Aerosol Powder Breath Activated, 200-25 MCG/INH, 1 puff, Inhalation, Once a day, rinse mouth after using, 30 days, 1 Inhalers, Refills 5, Notes: Written Order Per Provider
Refill Singulair Tablet, 10 MG, 1 tablet, Orally, Once a day, 30 days, 30, Refills 5, Notes: Written Order Per Provider
Clinical Notes:

Continue Breo 200 mcg once daily. Rinse mouth afterwards. We will represcribed Singulair 10 mg p.o. daily. Also prescribe albuterol nebs q.4 hours as needed. I do have some concern for obstructive sleep apnea. Refer for home sleep study. We briefly discussed CPAP therapy. Up-to-date on vaccinations. Reviewed action plan. Return to clinic in 6 months or sooner if needed.

Follow Up

6 Months

CJWRAY

Electronically signed by CHARLES WRAY , MD on 01/19/2020 at 09:44 AM CST

Sign off status: Completed

303111FSC FRIST CLINIC SPECIALTY
330 23RD AVE N
SUITE 500
NASHVILLE, TN 372031661
Tel: 615-342-5900
Fax: 615-342-7863

Patient: Maas, John S **DOB:** 02/08/1963 **Progress Note:** CHARLES J. WRAY, MD 01/17/2020

Note generated by eClinicalWorks EMR/PM Software (www.eClinicalWorks.com)

TRISTAR MEDICAL GROUP
The Frist Clinic

Maas, John S

56 Y old Male, DOB: 02/08/1963
Account Number: 8X101868423
505 Ripley Road, SPARTA, TN-38583
Home: 931-935-0449
Guarantor: Maas, John S Insurance: MEDICARE TN
PART B Payer ID: SMTNo
Appointment Facility: 303111FSC FRIST CLINIC SPECIALTY

07/17/2019 PROGRESS NOTE: CHARLES J. WRAY, MD CHN#: 1285662148

Current Medications

Taking
- Albuterol Sulfate HFA 108 (90 Base) MCG/ACT Aerosol Solution 2 puffs as needed Inhalation every 4 hrs
- Singulair 10 MG Tablet 1 tablet Orally Once a day
- Lisinopril 40 MG Tablet 1 tablet Orally Once a day
- Metoprolol Tartrate 25 MG Tablet 1 tablet with food Orally Twice a day
- Gabapentin 600 MG Tablet as directed Orally
- Vitamin D3 1000 UNIT Tablet 1 tablet Orally Once a day, Notes: 5000 IU
- Asmanex HFA 200 MCG/ACT Aerosol 2 puffs Inhalation Twice
- HydrOXYzine HCl 10 MG Tablet as directed Orally
- Albuterol Sulfate (2.5 MG/3 mL) 0.083% Nebulization Solution 1 vial as needed Inhalation every 8 hrs
- Medication List reviewed and reconciled with the patient

Past Medical History

Asthma.
Reported history of [illegible].
Dyslipidemia.
Neuropathy.

Family History

Mother: unknown
Father: unknown

Social History

Alcohol Use
Patient does not use alcohol
Tobacco Status
Patient is a never smoker

Allergies

N.K.D.A.

Reason for Appointment

1. 1 mo. f/u after ct chest

History of Present Illness

Patient History:

Here for follow-up. At the last visit, we switched him to Breo. He did seem to like this. When the samples ran out, he switched back to Asmanex. He does describe some fairly reproducible exertional dyspnea. No major exacerbations.

Vital Signs

Ht 69 in, Wt 251 lbs, BMI 37.06, Weight Change 5 lb, BP 120/66, HR 58, Oxygen sat % 93 ra rest.

Examination

PULMONARY:

General: no acute distress.
Head: atraumatic, normocephalic.
Eyes: pupils reactive to light bilaterally, sclerae anicteric.
Throat: moist mucous membranes, orophaynx without lesions.
Neck: supple, no thyromegaly, jugular venous pressure within normal limits.
Respiratory: normal respiratory effort, decreased breath sounds bilaterally, no crackles or wheezes.
Cardiovascular: normal rate, regular rhythm, no murmur.
Gastrointestinal: abdomen soft, non-tender, normoactive bowel sounds.
Neurology: moves all extremities.
Psych: alert and oriented x 3, normal affect.
Extremities: no cyanosis, clubbing, or edema.
Spirometry performed June 7, 2019 revealed severe restriction with significant bronchodilator response. Best FVC was 2.39 L representing 51% of predicted.
Chest CT scan performed July 17, 2019 was unremarkable. I personally reviewed this film.
Lab work from June 7, 2019 significant for IgE level of 232 and eosinophil level of 0.2.

Assessments

1. Unspecified asthma - J45.909 (Primary)
2. Dyspnea, unspecified type - R06.00
3. Restrictive pattern present on pulmonary function testing - R94.2
4. Nonsmoker - Z78.9

History of chemical inhalation 2009
Albuterol MDI causes a headache.

Treatment
1. Others
Start Breo Ellipta Aerosol Powder Breath Activated, 200-25 MCG/INH, 1 puff, Inhalation, Once a day, rinse mouth after using, 30 days, 1 Inhalers, Refills 11, Notes: Written Order Per Provider
Notes: breo 200mg 1 puff daily sample given, has been using.
Clinical Notes:

We discussed his testing results. The normal CT scan is reassuring. Continue Breo 200 mcg once daily. Rinse mouth afterwards. Provide samples and scripts. Continue Singulair 10 mg p.o. daily. Continue albuterol nebs as needed. Reviewed action plan. Return to clinic in 6 months or sooner if needed. 15 min spent in patient care.

Follow Up
6 Months

CJWRAY

Electronically signed by CHARLES WRAY , MD on 07/17/2019 at 04:43 PM CDT

Sign off status: Completed

303111FSC FRIST CLINIC SPECIALTY
330 23RD AVE N
SUITE 500
NASHVILLE, TN 372031661
Tel: 615-342-5900
Fax: 615-342-7863

TRI-STATE
Th

MEDICAL GROUP
ist Clinic

Maas, John S
56 Y old Male, DOB: 02/08/1963
Account Number: 8X101868423
505 Ripley Road, SPARTA, TN-38583
Home: 931-935-0449
Guarantor: Maas, John S Insurance: MEDICARE TN
PART B Payer ID: SMTNo
Appointment Facility: 303111FSC FRIST CLINIC SPECIALTY

06/07/2019

PROGRESS NOTE: CHARLES J. WRAY, MD CHN#: 1285662148

Current Medi s

Taking

- Albuterol Sulfate HF o Base) MCG/ACT Aerosol puffs as needed Inhalation
- Singulair 10 MG T et Orally Once a day
- Lisinopril 40 MG Ta blet Orally Once a day
- Metoprolol Tartrate ablet 1 tablet with food Orally Twi
- Gabapentin 600 MG is directed Orally
- Vitamin D3 1000 U t 1 tablet Orally Once a day, N o IU
- Asmanex HFA 200 l' Aerosol 2 puffs Inhalation Tw
- HydrOXYzine HCl let as directed Orally
- Albuterol Sulfate (: IL) 0.083% Nebulization Soluti s needed Inhalation every 8
- Medication List revi l reconciled with the patient

Past Medica ry

Asthma.
Reported history
Dyslipidemia.
Neuropathy.

Surgical His

Spine surgery 200
Umbilical hernia s o
Rotator cuff surger

Family Histo

Mother: unknown
Father: unknown

Social Histo

Alcohol Use
Patient *does not* ol
Tobacco Status
Patient is *a nev*

Allergies

N.K.D.A.

Review of S

Multi-system revie l from patient questionnaire. Pert ives and

Reason for Appointment

1. Asthma

History of Present Illness

Patient History:

56-year-old white male nonsmoker referred by Jeanne Thompson for pulmonary evaluation. He was apparently previously followed by Dr. Henson in Cookeville. He relates a history of asthma which she dates back to a chemical exposure in 2009. He was involved in cleaning up the BP oil spill. He tells me that the chemical was Corxit 9500 / 9527. He recalls burning in his eyes and lungs at that time. He had progressive symptoms and began receiving care for this in 2015. His current regimen includes Singulair, Asmanex, and albuterol. He tells me that the albuterol MDI gives him a headache but that the nebulized albuterol does not. He has oxygen which she wears at night. He does frequently have a productive cough. He complains of significant exertional dyspnea, wheezing, and chest tightness. He has also begun having some difficulty smelling. He apparently underwent a sleep study several years ago which he tells me was negative.

Vital Signs

Ht 69 in, Wt 246 lbs, BMI 36.32, BP 130/68, HR 66, Oxygen sat % 93 RA REST.

Examination

PULMONARY:

General: no acute distress.
Skin: no rash.
Head: atraumatic, normocephalic.
Eyes: pupils reactive to light bilaterally, sclerae anicteric.
Nose: clear bilaterally.
Throat: moist mucous membranes, orophaynx without lesions.
Neck: supple, no thyromegaly, jugular venous pressure within normal limits.
Respiratory: normal respiratory effort, decreased breath sounds bilaterally, no crackles or wheezes.
Cardiovascular: normal rate, regular rhythm, no murmur.
Gastrointestinal: abdomen soft, non-tender, normoactive bowel sounds.
Neurology: moves all extremities.
Psych: alert and oriented x 3, normal affect.
Lymph: no cervical or supraclavicular lymphadenopathy.
Extremities: no cyanosis, clubbing, or edema.

negatives as per his[...] [...]sent illness.
Otherwise negative

Spirometry performed June 7, 2019 revealed severe restriction with significant bronchodilator response. Best FVC was 2.39 L representing 51% of predicted.

Assessments

1. Unspecified asthma - J45.909 (Primary)
2. Dyspnea, unspecified type - R06.00
3. Restrictive pattern present on pulmonary function testing - R94.2
4. Nonsmoker - Z78.9

History of chemical inhalation 2009
Albuterol MDI causes a headache.

Treatment

1. Dyspnea, unspecified type

LAB: CBC W/DIFF(CENT-CBCD)
LAB: IMMUNOGLOBULIN E(CENT-IGE)
IMAGING: Spirometry Pre and Post (MMIQSPIROPP)
CLEMENTS,KATHY 06/07/2019 12:54:42 PM CDT > DONE

Referral To:Center Centennial Medical
Reason:CT CHEST WITHOUT CONTRAST, ***ANY DAY AFTER 12:30***

2. Others

Notes: breo 200mcg 1 puff daily to rinse mouth after using samples x2 with instructions given to pt.
Clinical Notes: To further evaluate his pulmonary status, I will obtain a noncontrast chest CT scan. I have advised him to stop Asmanex. We will escalate therapy to Breo 200 mcg once daily. Rinse mouth afterwards. Continue Singulair. Continue albuterol as needed. I will also obtain an IgE level as well as a CBC with differential to assess his eosinophil count in the event that biologic therapies might need to be considered down the road. Continue supplemental oxygen at night as needed. Return to clinic in 1 month or sooner if needed.

Procedure Codes

94060 SPIROMETRY CHALLENGE

Follow Up

One month

CJWRAY

Electronically signed by CHARLES WRAY , MD on 06/07/2019 at 05:17 PM CDT

Sign off status: Completed

303111FSC FRIST CLINIC SPECIALTY
330 23RD AVE N
SUITE 500
NASHVILLE, TN 372031661
Tel: 615-342-5900
Fax: 615-342-7863

Patient: Ma: **:1 S DOB: 02/08/1963 Progress Note: CHARLES J. WRAY, MD 06/07/2019**

:ote generated by eClinicalWorks EMR/PM Software (www.eClinicalWorks.com)

Maas, John S, M /08/1963

931-935-0449

303111FSC FRIST CLINIC SPECIALTY
330 23RD AVE N SUITE 500, NASHVILLE, TN 372031661
615-342-5900

Accession Id: CT004(

Order Date: 07/17/201

Procedure: 07/17/2019 10:24:00 Transcribed: 07/17/2019 10:24:00

Receiving Physician: V , CHARLES J Ordering Physician: WRAY, CHARLES

CT- CHES W/O CONTRAST(CENT-CHECT)

REPORT

Exam:
See Below For Re

CENTENNIAL MED CENTER
DEPARTMENT OF I CAL IMAGING
2300 PATTERSON EET
NASHVILLE, TN 03
PHONE #: 615-3 590
FAX #: 615-3 571

Name: MAAS,JOHN S
Phys: Wray,Charles J MD
DOB: 02/08/1963 Age: 56 Sex: M
Acct: M00172326588 Loc: M.CT
Exam Date: 07/17/2019 Status: REG CLI
Radiology No:
Unit No: M002197296

EXAMS:
004075042 CT CHE W/O CONTRAST

Reason::
DYSPNEA

CT of the st:

History: DY A.

Comparison: e.

5 mm contig slices were obtained through the chest without intravenous trast. No intravenous contrast was administered per request of rring physician. Per CMS specifications, dose optimizatio chniques including at least one of the following were performed, ppropriate: Automated exposure control, Adjustment of the mA and/ V according to the patient's size, use of iterative reconstruct techniques.

The finding e:
1. The lung pear clear of acute infiltrate or mass.
2. Evaluati he mediastinal structures is limited without IV contrast. T is atherosclerotic calcification of the coronary arteries. T ediastinal structures otherwise appear normal.
3. The ches ll structures appear normal.
4. There is bable sludge within the gallbladder. The visualized upper abdom structures otherwise appear normal.

Impressio
1. Lungs c.
2. Ather rotic calcification of the coronary arteries.

REPORT

3. Probal sludge within the gallbladder.

** Ele onically Signed by Gregory D. Smith MD **
** on 07/17/2019 at 1032 **
Reported and signed by: Gregory D. Smith, MD

CC: Charles J Wr MD

Dictated Date/T: 07/17/2019 (1024)
Technologist: C. T. Blanton; Laura Deimel, RT(R)(CT)
Transcribed Dat ne: 07/17/2019 (1024)
Orig Print D/T: 07/17/2019 (1034)
BATCH NO: N/A

PAGE 1 Signed Report

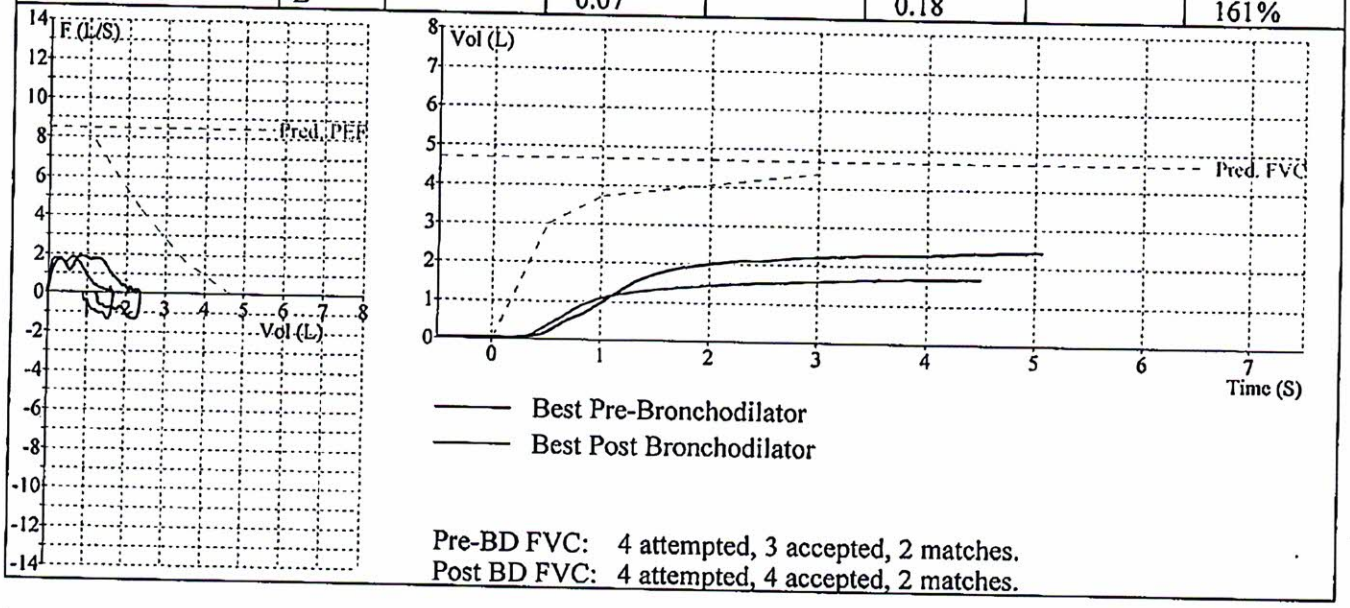
Maas, John S , M, 02/0 3 Accession ID: CT004075042

Spirometry Report

Midmark Diagnostics Group
1125 W. 190th Street
Gardena, California 90248

Name:	John S Maas	Age:	56 years	Race:	Caucasian
ID:	101868423	Height:	69 inches	Weight:	240 lbs.
Sex:	Male	Indication:			
Smoker:	No.	Medications:			
COPD Risk:	Very High	Lung Age:	> 84 years		
Requested By:	WRAY, CHARLES J	Performed By:	KC		
Test Date:	06/07/19 12:56:03	Sensor S/N:	552819		
Test Date Post:	06/07/19 13:10:29	Sensor Calibrated:	06/07/19 08:39:35		
Press./Temp.	760 mmHg./77 degrees F	Spiro Control Ver:	8.4.1		
Bronchodilator:		Normals/Interp.:	Crapo/ATS (1991)		

Measurement	Units	Predicted	Pre-Bronchodilator		Post-Bronchodilator		% Change
			Actual	% Pred.	Actual	% Pred.	
FVC	L	4.67	**1.68**	**36 %**	**2.39**	**51 %**	43 %
FEV1	L	3.70	1.22	33 %	1.68	45 %	37 %
FEV1/FVC	%	79 %	73 %	92 %	70 %	89 %	-3 %
FEF25%	L/S	7.84	1.65	21 %	1.16	15 %	-30 %
FEF50%	L/S	4.40	1.64	37 %	1.83	42 %	12 %
FEF75%	L/S	1.66	0.40	24 %	0.73	44 %	85 %
FEF25-75%	L/S	3.58	1.01	28 %	1.43	40 %	43 %
PEF	L/S	8.52	1.85	22 %	1.93	23 %	4 %
Exp. Time	Sec.		4.18		4.58		10 %
V ext.	L		0.07		0.18		161%



Pre-BD FVC: 4 attempted, 3 accepted, 2 matches.
Post BD FVC: 4 attempted, 4 accepted, 2 matches.

Interpretation: Severe restriction. Post bronchodilator test markedly improved.

Unconfirmed Report

BURGER, SCOTT & MCFARLIN
AN ASSOCIATION OF ATTORNEYS
12 PUBLIC SQUARE NORTH
MURFREESBORO, TENNESSEE 37130

WM. KENNERLY BURGER
CHRISTIAN K. BURGER
CLAIRE BURGER PERKINS

TELEPHONE (615) 893-8933
FACSIMILE (615) 893-5333
KENBURGER@COMCAST.NET

RODNEY M. SCOTT
BEN HALL (TREY) MCFARLIN, III

November 23, 2020

Dr. Charles J. Wray
The Frist Clinic
2400 Patterson Street, Suite 400
Nashville, TN 37203

Re: John Scott Maas
John Scott Ma **BP American**
Producti **April 20, 2010)**
U.S.D.C. Civil A

Dear Dr. Wray:

Please find enclosed an execu ation. This office is presently assisting your patien ain to his work on the Deepwater Horizon cleanup . Maas has recently moved to the Sparta, Tennessee a rred to the United States District Court for the Middle Distric.

Concisely summarized, Mr. Maas, as a at captain, was exposed on a daily basis to the chemical "Corexit" which was used as a alizing agent for crude oil. At the time, BP represented the very effective neutralizing agent as being "as safe as Dawn dishwashing soap." As you may be aware, it was ultimately determined that that information was patently false, and that it produces highly toxic results when combined with crude oil. Mr. Maas has advised me that for a period of about two months, he breathed the fumes generated by that chemical reaction, and his clothes were soaked, for eight to ten-hour workdays. It is my understanding that he did not immediately manifest anything other than minor, annoying symptoms. However, those symptoms apparently continued to impact Mr. Maas, as he found it increasingly difficult to perform the strenuous work that had been his life's ambition. Upon retiring at an early age, he eventually relocated to Middle Tennessee in about 2014. It is my understanding that his medical treatment in Mississippi was relatively minimal, and he was diagnosed with some type of respiratory chemical damage occurred at the Cookeville Regional Medical Center, prompting the referral to your office for evaluation and treatment. Mr. Maas has been very complimentary of your attentive treatment.

Because I have entered this matter at a late date, I need to expedite, if possible, Mr. Maas' response to the medical disclosures that must be filed in his litigation. If possible, could you please provide a brief narrative report that will summarize your thoughts regarding the central, medical causation issue. Concisely stated, are the matters for which you are presently treating Mr. Maas "... upon **reasonable medical certainty** ..." **probably** a result of the Corexit exposure?

Also, may I please request a complete copy of your office treatment chart, including any tests that have been performed. If you will advise me of the costs for your report, we will insure that it is paid immediately.

Sincerely,

BURGER, SCOTT & McFARLIN

Wm. Kennerly Burger

WKB/tlt
Enclosure

cc: Mr. John S. Maas
Mr. Christian K. Burger
Ms. Claire Burger Perkins
Mr. Trey McFarlin

G:\KENBURGER\CLIENTS\MAAS, John\Ltr-Wray.11-16-20

HIPAA-COMPLIANT AUTHORIZATION TO RELEASE CONFIDENTIAL MEDICAL INFORMATION

Pursuant to the provisions of 45 CFR 164.508(c)(1)-(3) and related statutory and regulatory requirements, the undersigned individual authorizes the release of confidential medical information to the person, or class of persons, designated below, for the purposes described:

Patient's Full Name: **John Scott Maas**

Date of Birth: 02-08-1963 Social Security Number: [redacted]

1. Description of the information to be used or disclosed: **Any and all medical and healthcare-related information pertaining to the undersigned individual, including but not limited to, records, documents, correspondence, photographs, audio or video recordings, X-ray, CT, MRI, or other similar graphic depictions, tangible or computer-generated model work and/or impressions, information about the generation, storage and/or maintenance of the above-named patient's medical information, and billing information specifically showing itemized charges, payments, adjustments, write-offs, and balance information, without condition or restriction.**

2. The name or other specific identification of the person or class of persons authorized to make the requested use or disclosure shall be: **Any and all health care providers who have at any time provided health care services for the benefit of the undersigned individual, including but not limited to any and all medical practitioners, physicians, pharmacists, hospitals, clinics, nurses, records custodians, or anyone else maintaining possession or control over the requested records.**

3. The name of the person or class of persons to whom the covered entity (the health care provider or record custodian) may make the requested use or disclosure:

Name: Wm. Kennerly Burger and/or Christian K. Burger

Address: 12 Public Square North, Murfreesboro, Tennessee 37130

and their agents, contractors, employees, representatives, affiliates, and assigns as necessary to fulfill the purpose of this disclosure.

EPA United States Environmental Protection Agency

COREXIT™ EC9500A

TECHNICAL PRODUCT BULLETIN #D-4
USEPA, OEM REGULATIONS IMPLEMENTATION DIVISION
ORIGINAL LISTING DATE: APRIL 13, 1994
REVISED LISTING DATE: DECEMBER 18, 1995
"COREXIT™ EC9500A"

I. NAME, BRAND, OR TRADEMARK

COREXIT™ EC9500A
Type of Product: Dispersant
(formerly COREXIT 9500)

II. NAME, ADDRESS, AND TELEPHONE NUMBER OF MANUFACTURER/CONTACT

Corexit Environmental Solutions LLC
11177 South Stadium Drive
Sugar Land, TX 77478
Product Management:
Mobile: (832) 851-5164
E-mail: debby.theriot@corexit.com
(Ms. Debby Theriot)

III. NAME, ADDRESS, AND TELEPHONE NUMBER OF PRIMARY DISTRIBUTORS

Corexit Environmental Solutions LLC
11177 South Stadium Drive
Sugar Land, TX 77478
Product Management:
Mobile: (832) 851-5164
E-mail: debby.theriot@corexit.com
(Ms. Debby Theriot)

IV. SPECIAL HANDLING AND WORKER PRECAUTIONS FOR STORAGE AND FIELD APPLICATION

1. Flammability:
IMO: Non-flammable; DOT: Non-hazardous.
2. Ventilation:
Use with ventilation equal to unobstructed outdoors in moderate breeze.
3. Skin and eye contact; protective clothing; treatment in case of contact:
Avoid eye contact. In case of eye contact, immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention. Avoid contact with skin and clothing. In case of skin contact, immediately flush with large amounts of water, and soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention. For open systems where contact is likely, wear long sleeve shirt, chemical resistant gloves, and chemical protective goggles.
4.a. Maximum storage temperature: 170°F
4.b. Minimum storage temperature: -30°F
4.c. Optimum storage temperature range: 40°F to 100°F
4.d. Temperatures of phase separations and chemical changes: None

V. SHELF LIFE

The shelf life of unopened drums of COREXIT™ EC9500A is unlimited. Containers should always be capped when not in use to prevent contamination and evaporation of solvents.

VI. RECOMMENDED APPLICATION PROCEDURE

VI. RECOMMENDED APPLICATION PROCEDURE

1. Application Method:
COREXIT™ EC9500A contains the same surfactants present in COREXIT™ EC9527A and a new improved oleophilic solvent delivery system.
Aerial Spraying - Aircraft provide the most rapid method of applying dispersants to an oil spill and a variety of aircraft can be used for spraying. For aerial spraying, COREXIT™ EC9500A is applied undiluted. Typical application altitudes of 30 to 50 feet have been used, although higher altitudes may be effective under certain conditions. Actual effective altitudes will depend on the application equipment, weather and aircraft. Careful selection of spray nozzles is critical to achieve desired dose levels, since droplet size must be controlled. Many nozzles used for agricultural spraying are of low capacity and produce too fine a spray. A quarter-inch open pipe may be all that is necessary if the aircraft travels at 120 mph (104 knots) or more, since the air shear at these speeds will be sufficient to break the dispersant into the proper sized droplets.
Boat Spraying - COREXIT™ EC9500A may also be applied by workboats equipped with spray booms mounted ahead of the bow wake or as far forward as possible. The preferred and most effective method of application from a workboat is to use a low-volume, low-pressure pump so the chemical can be applied undiluted. Spray equipment designed to provide a five to ten percent diluted dispersant solution to the spray booms can also be used. COREXIT™ EC9500A should be applied as droplets, not fogged or atomized. Natural wave or boat wake action usually provides adequate mixing energy to disperse the oil. Recent tests have indicated that a fire monitor modified with a screen cap for droplet size control may also be useful for applying COREXIT™ EC9500A. Due to the increased volume output and the greater reach of the fire monitor, significantly more area can be covered in a shorter period of time.
System Calibration - Spray systems should be calibrated at temperatures anticipated to insure successful application and dosage control. Application at sub-freezing temperatures may require larger nozzle, supply lines and orifices due to higher product viscosity.
2. Concentration/Application Rate:
A treatment rate of about 2 to 10 U.S. gallons per acre, or a dispersant to oil ratio of 1:50 to 1:10 is recommended. This rate varies depending on the type of oil, degree of weathering, temperature, and thickness of the slick.
3. Conditions for Use:
As with all dispersants, timely application ensures the highest degree of success. Early treatment with COREXIT™ EC9500A, even at reduced treat rates, can also counter the "mousse" forming tendencies of the spilled oil. COREXIT™ EC9500A is useful on oil spills in salt water.

VII. TOXICITY AND EFFECTIVENESS

VII. TOXICITY AND EFFECTIVENESS

a. Toxicity

Material Tested	Species	LC50 (ppm)
COREXIT™ EC9500A	Menidia beryllina Mysidopsis bahia	25.20 96-hr 32.23 48-hr
No. 2 Fuel Oil	Menidia beryllina Mysidopsis bahia	10.72 96-hr 16.12 48-hr
COREXIT™ EC9500A & No. 2 Fuel Oil (1:10)	Menidia beryllina Mysidopsis bahia	2.61 96-hr 3.40 48-hr
Reference Toxicant (SDS)	Menidia beryllina Mysidopsis bahia	7.07 96-hr 9.82 48-hr

NOTE: This toxicity data was derived using the concentrated product. See Section VI of this bulletin for information regarding the manufacturer's recommendations for concentrations and application rates for field use.

b. Effectiveness:
SWIRLING FLASK DISPERSANT EFFECTIVENESS TEST WITH SOUTH LOUISIANA (S/L) AND PRUDHOE BAY (P/B) CRUDE OILS

Oil	Effectiveness (%)
Prudhoe Bay Crude	45.3%
South Louisiana Crude	54.7%
Average of Prudhoe Bay and South Louisiana Crudes	50.0 %

VIII. PHYSICAL PROPERTIES

1. Flash Point: 181.4°F
2. Pour Point: Less than -71°F
3. Viscosity: 22.5 cst at 104°F
4. Specific Gravity: 0.949 at 60°F
5. pH: 6.2
6. Chemical Name and Percentage by Weight of the Total Formulation: CONFIDENTIAL
7. Surface Active Agents: CONFIDENTIAL
8. Solvents: CONFIDENTIAL
9. Additives: None
10. Solubility: Miscible

IX. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED HYDROCARBONS

IX. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED HYDROCARBONS

Compound	Concentration (ppm)
Arsenic	0.16
Cadmium	N/D
Chromium	0.03
Copper	0.10
Lead	N/D
Mercury	N/D
Nickel	N/D
Zinc	N/D
Cyanide	N/D
Chlorinated Hydrocarbons	N/D

N/D = Not detected

LAST UPDATED ON OCTOBER 22, 2019